

**TOXICOLOGICAL PROFILE FOR  
DIAZINON**

**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES**  
**Public Health Service**  
Agency for Toxic Substances and Disease Registry

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The use of company or product name(s) is for identification only and does not imply endorsement by the Agency for Toxic Substances and Disease Registry.

**UPDATE STATEMENT**

Toxicological profiles are revised and republished as necessary, but no less than once every three years. For information regarding the update status of previously released profiles, contact ATSDR at:

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## FOREWORD

This toxicological profile is prepared in accordance with guidelines\* developed by the Agency for Toxic Substances and Disease Registry (ATSDR) and the Environmental Protection Agency (EPA). The original guidelines were published in the *Federal Register* on April 17, 1987. Each profile will be revised and republished as necessary.

The ATSDR toxicological profile succinctly characterizes the toxicologic and adverse health effects information for the hazardous substance described therein. Each peer-reviewed profile identifies and reviews the key literature that describes a hazardous substance's toxicologic properties. Other pertinent literature is also presented, but is described in less detail than the key studies. The profile is not intended to be an exhaustive document; however, more comprehensive sources of specialty information are referenced.

The focus of the profiles is on health and toxicologic information; therefore, each toxicological profile begins with a public health statement that describes, in nontechnical language, a substance's relevant toxicological properties. Following the public health statement is information concerning levels of significant human exposure and, where known, significant health effects. The adequacy of information to determine a substance's health effects is described in a health effects summary. Data needs that are of significance to protection of public health are identified by ATSDR and EPA.

Each profile includes the following:

- (A) The examination, summary, and interpretation of available toxicologic information and epidemiologic evaluations on a hazardous substance to ascertain the levels of significant human exposure for the substance and the associated acute, subacute, and chronic health effects;
- (B) A determination of whether adequate information on the health effects of each substance is available or in the process of development to determine levels of exposure that present a significant risk to human health of acute, subacute, and chronic health effects; and
- (C) Where appropriate, identification of toxicologic testing needed to identify the types or levels of exposure that may present significant risk of adverse health effects in humans.

The principal audience for the toxicological profiles is health professionals at the Federal, State, and local levels; interested private sector organizations and groups; and members of the public.

This profile reflects ATSDR's assessment of all relevant toxicologic testing and information that has been peer-reviewed. Staff of the Centers for Disease Control and Prevention and other Federal scientists have also reviewed the profile. In addition, this profile has been peer-reviewed by a nongovernmental panel and was made available for public review. Final responsibility for the contents and views expressed in this toxicological profile resides with ATSDR.



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## Legislative Background

The toxicological profiles are developed in response to the Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99-499) which amended the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund). This public law directed ATSDR to prepare toxicological profiles for hazardous substances most commonly found at facilities on the CERCLA National Priorities List and that pose the most significant potential threat to human health, as determined by ATSDR and the EPA. The availability of the revised priority list of 275 hazardous substances was announced in the Federal Register on April 29, 1996 (61 FR 18744). For prior versions of the list of substances, see Federal Register notices dated April 17, 1987 (52 FR 12866); October 20, 1988 (53 FR 41280); October 26, 1989 (54 FR 43619); October 17, 1990 (55 FR 42067); October 17, 1991 (56 FR 52166); October 28, 1992 (57 FR 48801); and February 28, 1994 (59 FR 9486). Section 104(I)(3) of CERCLA, as amended, directs the Administrator of ATSDR to prepare a toxicological profile for each substance on the list.

## CONTRIBUTORS

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### THE PROFILE HAS UNDERGONE THE FOLLOWING ATSDR INTERNAL REVIEWS:

- 1 . Green Border Review. Green Border review assures consistency with ATSDR policy.
- 2 . Health Effects Review. The Health Effects Review Committee examines the health effects chapter of each profile for consistency and accuracy in interpreting health effects and classifying end points.
- 3 . Minimal Risk Level Review. The Minimal Risk Level Workgroup considers issues relevant to substance-specific minimal risk levels (MRLs), reviews the health effects database of each profile, and makes recommendations for derivation of MRLs.



## PEER REVIEW

A peer review panel was assembled for diazinon. The panel consisted of the following members:

1. Dr. Morris Cranmer, Private Consultant, Cranmer & Associates, Little Rock, Arkansas;
2. Dr. Donald Morgan, Private Consultant, Iowa City, Iowa; and
3. Dr. Josef Seifert, Professor of Environmental Biochemistry, University of Hawaii, Honolulu, Hawaii.

These experts collectively have knowledge of diazinon's physical and chemical properties, toxicokinetics, key health end points, mechanisms of action, human and animal exposure, and quantification of risk to humans. All reviewers were selected in conformity with the conditions for peer review specified in Section 104(i)(13) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended.

Scientists from the Agency for Toxic Substances and Disease Registry (ATSDR) have reviewed the peer reviewers' comments and determined which comments will be included in the profile. A listing of the peer reviewers' comments not incorporated in the profile, with a brief explanation of the rationale for their exclusion, exists as part of the administrative record for this compound. A list of databases reviewed and a list of unpublished documents cited are also included in the administrative record.

The citation of the peer review panel should not be understood to imply its approval of the profile's final content. The responsibility for the content of this profile lies with the ATSDR.



## CONTENTS

FOREWORD .....	v
CONTRIBUTORS .....	vii
PEER REVIEW .....	ix
LIST OF FIGURES .....	xv
LIST OF TABLES .....	xvii
<b>1. PUBLIC HEALTH STATEMENT .....</b>	<b>1</b>
1.1 WHAT IS DIAZINON? .....	1
1.2 WHAT HAPPENS TO DIAZINON WHEN IT ENTERS THE ENVIRONMENT? .....	2
1.3 HOW MIGHT I BE EXPOSED TO DIAZINON? .....	3
1.4 HOW CAN DIAZINON ENTER AND LEAVE MY BODY? .....	3
1.5 HOW CAN DIAZINON AFFECT MY HEALTH? .....	4
1.6 IS THERE A MEDICAL TEST TO DETERMINE WHETHER I HAVE BEEN EXPOSED TO DIAZINON? .....	5
1.7 WHAT RECOMMENDATIONS HAS THE FEDERAL GOVERNMENT MADE TO PROTECT HUMAN HEALTH? .....	5
1.8 WHERE CAN I GET MORE INFORMATION? .....	6
<b>2. HEALTH EFFECTS .....</b>	<b>7</b>
2.1 INTRODUCTION .....	7
2.2 DISCUSSION OF HEALTH EFFECTS BY ROUTE OF EXPOSURE .....	7
2.2.1 Inhalation Exposure .....	9
2.2.1.1 Death .....	9
2.2.1.2 Systemic Effects .....	9
2.2.1.3 Immunological and Lymphoreticular Effects .....	15
2.2.1.4 Neurological Effects .....	15
2.2.1.5 Reproductive Effects .....	18
2.2.1.6 Developmental Effects .....	18
2.2.1.7 Genotoxic Effects .....	18
2.2.1.8 Cancer .....	18
2.2.2 Oral Exposure .....	19
2.2.2.1 Death .....	19
2.2.2.2 Systemic Effects .....	23
2.2.2.3 Immunological and Lymphoreticular Effects .....	54
2.2.2.4 Neurological Effects .....	55
2.2.2.5 Reproductive Effects .....	63
2.2.2.6 Developmental Effects .....	65
2.2.2.7 Genotoxic Effects .....	67
2.2.2.8 Cancer .....	67
2.2.3 Dermal Exposure .....	68
2.2.3.1 Death .....	68
2.2.3.2 Systemic Effects .....	69
2.2.3.3 Immunological and Lymphoreticular Effects .....	74

2.2.3.3	Immunological and Lymphoreticular Effects	74
2.2.3.4	Neurological Effects	74
2.2.3.5	Reproductive Effects	75
2.2.3.6	Developmental Effects	75
2.2.3.7	Genotoxic Effects	75
2.2.3.8	Cancer	75
2.3	TOXICOKINETICS	76
2.3.1	Absorption	76
2.3.1.1	Inhalation Exposure	76
2.3.1.2	Oral Exposure	76
2.3.1.3	Dermal Exposure	77
2.3.2	Distribution	77
2.3.2.1	Inhalation Exposure	77
2.3.2.2	Oral Exposure	77
2.3.2.3	Dermal Exposure	77
2.3.2.4	Other Exposure	78
2.3.3	Metabolism	78
2.3.3.1	Inhalation Exposure	78
2.3.3.2	Oral Exposure	78
2.3.3.3	Dermal Exposure	79
2.3.3.4	Other Exposure	79
2.3.4	Excretion	79
2.3.4.1	Inhalation Exposure	79
2.3.4.2	Oral Exposure	79
2.3.4.3	Dermal Exposure	81
2.3.4.4	Other Exposure	81
2.4	MECHANISMS OF ACTION	81
2.5	RELEVANCE TO PUBLIC HEALTH	83
2.6	BIOMARKERS OF EXPOSURE AND EFFECT	93
2.6.1	Biomarkers Used to Identify or Quantify Exposure to Diazinon	96
2.6.2	Biomarkers Used to Characterize Effects Caused by Diazinon	96
2.7	INTERACTIONS WITH OTHER CHEMICALS	97
2.8	POPULATIONS THAT ARE UNUSUALLY SUSCEPTIBLE	99
2.9	METHODS FOR REDUCING TOXIC EFFECTS	100
2.9.1	Reducing Peak Absorption Following Exposure	100
2.9.2	Reducing Body Burden	101
2.9.3	Interfering with the Mechanism of Action for Toxic Effects	101
2.10	ADEQUACY OF THE DATABASE	102
2.10.1	Existing Information on Health Effects of Diazinon	102
2.10.2	Identification of Data Needs	104
2.10.3	Ongoing Studies	113
3.	CHEMICAL AND PHYSICAL INFORMATION	115
3.1	CHEMICAL IDENTITY	115
3.2	PHYSICAL AND CHEMICAL PROPERTIES	115
4.	PRODUCTION, IMPORT/EXPORT, USE, AND DISPOSAL	119
4.1	PRODUCTION	119
4.2	IMPORT/EXPORT	119

4.3	USE	120
4.4	DISPOSAL	121
5.	POTENTIAL FOR HUMAN EXPOSURE	123
5.1	OVERVIEW	123
5.2	RELEASES TO THE ENVIRONMENT	126
5.2.1	Air	126
5.2.2	Water	126
5.2.3	Soil	128
5.3	ENVIRONMENTAL FATE	128
5.3.1	Transport and Partitioning	129
5.3.2	Transformation and Degradation	132
5.3.2.1	Air	132
5.3.2.2	Water	133
5.3.2.3	Soil Transformation and Degradation	135
5.4	LEVELS MONITORED OR ESTIMATED IN THE ENVIRONMENT	137
5.4.1	Air	137
5.4.2	Water	141
5.4.3	Sediment and Soil	144
5.4.4	Other Environmental Media	144
5.5	GENERAL POPULATION AND OCCUPATIONAL EXPOSURE	145
5.6	POPULATIONS WITH POTENTIALLY HIGH EXPOSURES	149
5.7	ADEQUACY OF THE DATABASE	149
5.7.1	Identification of Data Needs	150
5.7.2	Ongoing Studies	153
6.	ANALYTICAL METHODS	157
6.1	BIOLOGICAL SAMPLES	157
6.2	ENVIRONMENTAL SAMPLES	169
6.3	ADEQUACY OF THE DATABASE	174
6.3.1	Identification of Data Needs	174
6.3.2	Ongoing Studies	176
7.	REGULATIONS AND ADVISORIES	177
8.	REFERENCES	183
9.	GLOSSARY	207
APPENDICES		
A.	ATSDR MINIMAL RISK LEVEL	A-1
B.	USER'S GUIDE	B-1
C.	ACRONYMS, ABBREVIATIONS, AND SYMBOLS	C-1



## LIST OF FIGURES

2-1	Levels of Significant Exposure to Diazinon - Inhalation . . . . .	13
2-2	Levels of Significant Exposure to Diazinon - Oral . . . . .	41
2-3	Proposed Mammalian Metabolic Pathway for Diazinon . . . . .	80
2-4	Existing Information on Health Effects of Diazinon . . . . .	103
5-1	Frequency of Sites with Diazinon Contamination . . . . .	125



## LIST OF TABLES

2-1	Levels of Significant Exposure to Diazinon - Inhalation . . . . .	11
2-2	Levels of Significant Exposure to Diazinon - Oral . . . . .	24
2-3	Levels of Significant Exposure to Diazinon - Dermal . . . . .	70
2-4	Genotoxicity of Diazinon <i>In Vitro</i> . . . . .	94
3-1	Chemical Identity of Diazinon . . . . .	116
3-2	Physical and Chemical Properties of Diazinon . . . . .	117
5-1	Bioconcentration Data for Diazinon . . . . .	131
6-1	Analytical Methods for Determining Diazinon and Transformation Products in Biological Samples . . . . .	158
6-2	Analytical Methods for Determining Diazinon and Transformation Products in Environmental Samples . . . . .	160
7-1	Regulations and Guidelines Applicable to Diazinon . . . . .	178

